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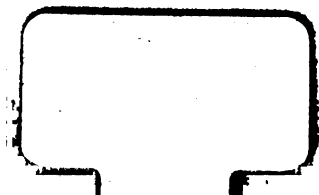
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RULES
FOR THE
Measurement and Inspection
OF
Hardwood Lumber

PUBLISHED BY
**The National
Hardwood Lumber
Association**

Adopted at Annual Meeting

HELD IN
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ESTIMATED WEIGHTS OF LUMBER Per 1,000 Feet

	DRY	GREEN
Black Ash.....	3,200	4,600
White Ash.....	3,800	4,600
Basswood.....	2,500	4,200
Beech.....	4,000	5,750
Birch.....	4,000	5,500
Butternut.....	2,500	4,000
Cherry.....	3,800	5,000
Chestnut.....	2,800	5,000
Cypress.....	3,000	5,000
Cottonwood.....	2,800	4,600
Rock Elm.....	4,000	5,400
Soft Elm.....	3,100	4,750
Gum Red.....	3,300	5,400
Gum Sap.....	3,000	5,000
Hickory.....	4,500	6,000
Mahogany.....	3,500	4,500
Maple, Hard.....	3,900	5,400
Maple, Soft.....	3,300	5,000
Oak.....	4,000	5,500
Poplar.....	2,800	3,900
Poplar Bay (Tupelo).....	2,800	3,900
Sycamore.....	3,000	4,750
Walnut.....	3,800	4,900

At the twelfth annual convention held in Detroit, Mich., on June 11, 1909, this association by unanimous vote endorsed and adopted the table of weights of the National Wholesale Lumber Dealer's Association. Members wanting table of estimated weights on Yellow Pine, Cypress and Oak Flooring are referred to the table published by the National Wholesale Lumber Dealer's Association of New York.

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FEES FOR THE MEASUREMENT AND INSPECTION OF LUMBER.

Ash	50
Basswood	50
Birch	50
Beech	50
Cherry	60
Chestnut	50
Cottonwood	50
Cypress	50
Soft Elm	50
Rock Elm	60
Gum	50
Hickory	60
Maple	50
Oak, Plain	50
Oak, Quartered	60
Poplar	50
Sycamore	50
Walnut	75
Strips	1.00

For wagon stock a minimum charge of 50c per M ft. For worked Poplar, Gum and Flooring a minimum charge of \$1.00 per M ft. An additional charge will be made for the inspection of the above woods if conditions warrant.

On all woods not named above the inspection fee shall be 60 cents per thousand feet.

Inspectors shall be entitled to reasonable compensation for traveling expenses, hotel bills and time when their duties necessitate such trips.

Inspectors shall also be entitled to extra compensation for inspecting badly mixed lots.

IMPORTANT.

Members are requested to enclose check to inspectors to cover railroad and hotel expense when ordering inspectors to do work necessitating such expense. This will prevent delay, and the National Hardwood Lumber Association guarantees a correct accounting of all such advances to the salaried inspectors.

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NOTICE

These instructions for the guidance of lumber inspectors in the measurement and inspection of hardwood lumber were formulated and have been adopted by the National Hardwood Lumber Association. They are copyrighted in the name of the Association, which will not permit any violation of its rights under the copyright law.

By action of the Association in convention assembled at Memphis, Tennessee, November 16th, 1899, it was provided that ten copies of the rules of inspection shall be furnished annually to members free of cost: that extra copies to members and to non-members will be furnished by the Secretary at ten cents per copy.

It was further provided that these rules shall be published by the Association only, and that they shall contain no advertisement, and that none shall be stamped or written thereon by anybody after publication.

FRANK F. FISH, Secretary

1864 McCormick Building
CHICAGO, ILL.

National Hardwood Lumber Association

HOW TO OBTAIN NATIONAL INSPECTION

All applications for National Association Inspection must be made to the Secretary or a licensed inspector of the Association by a member of the Association.

Members requiring the services of a National Inspector, may make application direct to the Inspector who is most convenient to the point where the inspection is to occur. A list of National Inspectors, together with the address of each, is printed in every issue of the official monthly bulletin.

It should be thoroughly understood by each member that this Association possesses no authority to impose its inspection in any of the markets, except through the mutual agreement of parties at interest; therefore, unless it is explicitly stated in the contract of sale or purchase, that the lumber concerned in the transaction is subject to National Inspection, such inspection cannot be insisted upon by either buyer or seller, and can only be made available by the mutual consent of both parties after a dispute has arisen. It is, therefore, absolutely necessary in any transaction involving the sale or purchase of lumber, in which a member of this Association relies upon the efficacy of the inspection department of the Association, for the just protection of his interests, that it be clearly stated in the contract of sale or purchase that National Inspection is to prevail. The following form for such a clause in contracts of that nature is recommended:

"The lumber is to be inspected according to the rules and regulations of the National Hardwood Lumber Association by a National Inspector, who shall issue the official inspection certificate of said Association, certifying to the amount and grade of lumber so inspected."

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With the foregoing clause in a contract, lumber may be inspected either at point of shipment or at destination. The point of inspection to be governed by the convenience in securing the services of a National inspector.

ORIGINAL INSPECTION.

Members requiring the services of a National Inspector, are requested to make application direct to the Inspector who is most convenient to the point where the inspection is to occur. A list of National Inspectors, together with the address of each, is printed in every issue of the official Bulletin.

When an inspection by an authorized Inspector of the National Hardwood Lumber Association is completed, the inspector shall deliver to the member requesting the inspection a certificate in duplicate, certifying to the amount and grade of lumber so inspected. This certificate is final for settlement as between seller and buyer in all cases where an agreement as to the application of National Inspection exists between the parties.

The expense of the inspection at the rate per M. for different kinds of lumber, set forth in a table upon page 4, may be divided between buyer and seller, or may be borne by either, according to special agreement; but a bill will be rendered by the Secretary against the member calling for the inspection, which bill is due and payable upon demand.

Inspectors are required to inspect the full amount of lumber as contained in an original shipment, and they are expressly forbidden to apply National Inspection to a portion of a shipment after selections have been made therefrom, unless both seller and buyer agree thereto.

Only members of the National Hardwood Lumber Association can obtain an Original National Inspection and any member who applies for Inspection on lumber which he has neither bought nor sold is subject to suspension or expulsion from the Association.

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RE-INSPECTION.

Should either party to the transaction involving an original inspection be dissatisfied with the result of the same, it is within his right, whether a member of the Association or not, to call for a re-inspection, provided stock is intact.

This class of inspection can only be obtained by applying to the Secretary.

Upon application for re-inspection of a lot of lumber for which a certificate has been regularly issued by a national inspector, the chief inspector shall proceed as promptly as possible to reinspect the lumber in person, or by a deputy, other than the inspector making the original inspection. If the re-inspection results in a difference in favor of the party complaining, of more than four per cent in money value from the original inspection, the party complaining may obtain the amount of such difference directly from this Association by sending to the Secretary an itemized statement showing in detail the items and amounts as shown on the original certificate and the re-inspection certificate. No claim on reinspection will be paid until prices placed on off grade items are approved by the Executive Committee. If the difference does not exceed four per cent, the party demanding the re-inspection shall pay all expenses connected therewith. The above rule and guarantee does not apply on certificates issued on lumber loaded green. The Association reserves the right to decline official reinspection on lumber shipped in leaky cars or delayed beyond a reasonable period in transit. The Association assumes no liability on account of demurrage. All applications for re-inspection shall be made within ten days from receipt of lumber at destination, provided the original inspection was made at point of shipment; or within ten days from date of original inspection, if same is made at destination.

GENERAL INSTRUCTIONS

Inspectors are instructed to study these rules carefully and use their best judgment in applying them.

Exceptions to the general rules are stated under the caption of the respective woods.

Lumber must be inspected and measured as the inspector finds it, of full length and width. He shall make no allowance for the purpose of raising the grade.

Inspection must be made from the poor side of the piece.

Lumber should be properly manufactured, of good average widths and lengths. It should have parallel edges, and all ragged and bad ends should be trimmed off. Tapering lumber in standard lengths must be measured one-third the length of the piece from the narrow end. It must be of standard thickness when shipping dry, with the exception that in the grades of Common, the percentage not included in the cuttings may be scant in thickness, provided the cuttings are of standard thickness and that there is no greater variation in the thickness of the board than is allowed in the rule describing miscut lumber.

Ninety per cent of the minimum widths mentioned in all grades of lumber must be full width, the remaining 10 per cent may be $\frac{1}{4}$ -inch scant in width.

In the measurement of lumber of random widths, fractions of over one-half foot, as shown on the board rule, must be counted up to the next higher figure; fractions of exactly one-half foot and less, as shown on the board rule, must be counted back to the next lower figure.

The number of defects admitted in any piece of lumber must be determined in ac-

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cordance with the surface measurement as defined by these rules.

A piece tally in feet must be made of all lumber. All lumber of standard grades and thicknesses must be tallied face or surface measure, and this tally must be the number of feet, board measure, of 1 inch lumber. If the lumber is thicker than 1 inch, then the tally so obtained must be multiplied by the thickness as expressed in inches and fractions of an inch. All lumber less than 1 inch must be counted face measure. When strips or stock-widths are measured, a tally showing widths and lengths must be made.

Lumber showing greater variation in thickness than $\frac{1}{8}$ inch at any point in stock cut $\frac{1}{2}$ inch thick or less, or $\frac{1}{8}$ inch in $\frac{5}{8}$ and $\frac{3}{4}$ inch stock, or $\frac{1}{4}$ inch in 1 to 2 inch stock, or $\frac{3}{8}$ inch in $2\frac{1}{2}$ inch and thicker stock, must be measured at the thinnest part and classed as missawn, and graded and reported as such.

These rules define the poorest piece in any given grade, but the respective grades must contain all pieces up to the next higher grade.

In the grade of No. 1 Common, no piece shall contain heart to exceed one-half its length in the aggregate.

In the grade of No. 2 Common, no piece shall contain heart to exceed three-fourths its length in the aggregate.

STANDARD GRADES.

The standard grades of hardwood lumber are found under the caption of the respective woods. Firsts and Seconds are combined as one grade.

The percentages of Firsts in the combined grade of Firsts and Seconds to be as follows:

Poplar, not less than 50 per cent.

Mexican Mahogany, not less than 40 per cent.

African Mahogany, not less than 35 per cent.

Tupelo, Plain and Quartered Sycamore, White Ash, Plain Oak, Chestnut, Red Gum, Sap Gum, Cottonwood, Black Gum, Magnolia and Locust, not less than $33\frac{1}{2}$ per cent.

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Cherry, Beech, Soft Elm, Buckeye, Quartered Oak, Quartered Red Gum and Quartered Red Gum, Sap no defect, not less than 25 per cent.

Hard Maple, Soft Maple, Birch, Black Ash and Basswood, not less than 20 per cent.

STANDARD LENGTHS.

Standard lengths are 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 feet, but not over 15 per cent of odd lengths are admitted.

In the grade of Firsts and Seconds the lengths are 8 to 16 feet, but there must not be more than 20 per cent under 12 feet, and not to exceed 10 per cent of 8 and 9-foot lengths.

STANDARD THICKNESSES.

The standard thicknesses of hardwood lumber are: $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$, 5, $5\frac{1}{2}$ and 6 inches.

The standard thicknesses for surfaced lumber are as follows:

Rough.	Surfaced.
$\frac{3}{8}$ " S-2-S to	$\frac{1}{8}$ "
$\frac{1}{2}$ " S-2-S to	$\frac{1}{8}$ "
$\frac{5}{8}$ " S-2-S to	$\frac{1}{8}$ "
$\frac{3}{4}$ " S-2-S to	$\frac{1}{8}$ "
1 " S-2-S to	$\frac{1}{8}$ "
$1\frac{1}{4}$ " S-2-S to	$1\frac{1}{8}$ "
$1\frac{1}{2}$ " S-2-S to	$1\frac{1}{8}$ "
$1\frac{3}{4}$ " S-2-S to	$1\frac{1}{2}$ "
2 " S-2-S to	$1\frac{3}{4}$ "
$2\frac{1}{2}$ " S-2-S to	$2\frac{1}{4}$ "
3 " S-2-S to	$2\frac{3}{4}$ "
$3\frac{1}{2}$ " S-2-S to	$3\frac{1}{4}$ "
4 " S-2-S to	$3\frac{3}{4}$ "

Lumber surfaced one side only must be $\frac{1}{8}$ " full of the above thicknesses.

STANDARD DEFECTS.

Each of the following defines one standard defect:

One knot $1\frac{1}{4}$ inches in diameter.

Two knots not exceeding in extent or damage one $1\frac{1}{4}$ inch knot.

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Splits—In lumber of random widths, one split not diverging more than 1 inch to a foot, and not exceeding in length in inches the surface measure of the piece in feet; but not more than two defects of this character are admitted in a piece of the grade of Firsts and Seconds. Firsts and Seconds sold in any series of special widths 10" or wider will not allow more than one standard defect of this character in any piece.

Worm, grub, knot and rafting-pin holes, not exceeding in extent or damage one 1½ inch knot.

NOTE—Six inches of straight split in one end, or its equivalent in both ends, will not be considered a defect in the grade of Firsts and Seconds.

Bright sap is no defect unless so stated under caption of the respective woods.

Heart and other defects not enumerated, where the extent or damage exceeds the equivalent of standard defects allowed, will not be admitted in the grade of Firsts and Seconds.

EXPLANATIONS.

The term "Sound Cutting" as used in these rules means a cutting free from rot and shake and other defects which materially impair the strength of the piece.

The term "Clear Face" as used in these rules applies only to the description of the cutting and means a cutting having one face clear and the reverse face sound. The clear face of cutting is determined from the poor side of the piece of lumber.

The word "cutting" as used in these rules means both cutting and ripping.

Ordinary season checks are not to be considered defects, but if of so serious a character as to damage the lumber they are to be considered by the inspector.

Stain that will surface off in dressing to the standard thickness must not be considered a defect.

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Wane along the edge not exceeding one-sixth the length of the piece, or its equivalent at one end or both ends, not exceeding in thickness one-half the thickness of the piece, and not exceeding in width, as shown in the following table, is not a defect:

$\frac{1}{2}$ " in width in $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " lumber.

$\frac{3}{4}$ " in width in 1", $1\frac{1}{4}$ ", $1\frac{1}{2}$ ", $1\frac{3}{4}$ " and 2" lumber.

1" in width in $2\frac{1}{2}$ " and thicker lumber.

Wane in addition to the amount allowed in this rule must be estimated in the extent of its damage on basis of the equivalent of standard defects.

Defects not enumerated as standard defects that do not damage the piece more than the standard defects allowed, are equivalent defects and must be so considered by the inspector.

In the following rules all widths and lengths mentioned are inclusive.

SPECIAL INSPECTION.

"Log Run" means the full run of the logs, with all grades below No. 2 Common excluded.

No. 1 Common and Better means the full run of the log with No. 2 and No. 3 Common out.

Mill run means the full run of the log, No. 3 common and better.

FINISH—Finish must be 4 inches and over wide, 8 to 16 feet long, but not exceeding 10 per cent of 8 and 9 feet lengths. Pieces 6 feet surface measure may have one, 9 feet two, 12 feet three, and 16 feet and over four standard defects or their equivalent. Inspection must be made from the good face of the piece. The reverse face must be sound.

The grade of No. 3 Common when desired may be divided as follows:

No. 3-A: Must be 3 inches and over wide, 4 feet and over long. This grade will admit of shake, knots, heart, wane and any other defects which do not materially affect the

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strength of the piece or its use as a whole. The grade to be determined from the good face. An occasional knot-hole will be admitted in this grade.

No. 3-B: Consists of all lumber below the grade of No. 3-A which will cut 25 per cent and over sound.

SQUARES.

Grades: Firsts and Seconds, Sound, No. 1 Common and No. 2 Common.

Sizes: 3x3, 4x4, 5x5, 6x6, 7x7, 8x8, 9x9, 10x10 and 12x12.

Lengths: Standard.

In the grades of Firsts and Seconds and Sound, one-third of the pieces may have wane on one corner that will be removed in turning the square to its working size.

Splits not exceeding 6" in length in one end in the grades of Firsts and Seconds and Sound are not to be considered defects; splits longer than 6" not to be admitted in these grades.

Walnut, Cherry and Red Gum Squares will not admit more sap than will be removed in turning the square to its working size. Squares in other woods will admit any amount of bright sap.

FIRSTS AND SECONDS—

Lengths: 8 to 16 feet.

Sound standard defects are admitted according to the size of the square, as follows:

3x3, 4x4 and 5x5...	1 Sound Standard Defect
6x6 and 7x7.....	2 Sound Standard Defects
8x8 and 9x9.....	3 Sound Standard Defects
10x10 and 12x12...	4 Sound Standard Defects

SOUND—

Sound discolored sap is no defect in this grade.

Lengths 8 to 16 feet.

Sound squares must work sound full length.

NO. 1 COMMON—

Slightly discolored sap is no defect in this grade.

Lengths 6 to 16 feet.

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No. 1 Common Squares must work 66 2-3% in cuttings 2 feet or over long by the full size of the square; three sides of each cutting must be clear; the fourth side may have one sound standard defect or its equivalent.

NO. 2 COMMON—

Lengths 6 to 16 feet.

No. 2 Common Squares must work 50% sound in cuttings 2 feet or over long, by the full size of the square.

STEP PLANK—

Grades: Firsts and Seconds, and Common.

Widths: 11 to 15 inches.

Thicknesses: $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inches.

Lengths: 10 to 16 feet.

Firsts and Seconds must be clear one face and one edge. The reverse side and one edge must be sound. Firsts and Seconds may have a split not exceeding 12 inches in length.

COMMON must work 66 2-3% in cuttings 4 feet or over long by the full width of the piece. Each cutting must have one face and one edge clear, the reverse face and edge must be sound.

NO. 1 WHITE MAPLE—No. 1 White Maple must be 4 inches and over wide, 8 feet and over long.

Two sides and two edges must be white.

Standard defects are admitted in widths 6 inches and over according to surface measure as follows:

4 and 5 inch pieces must be clear.

6 feet, 1 standard defect or its equivalent.

9 feet, 2 standard defects or their equivalent.

13 feet, 3 standard defects or their equivalent.

18 feet and over, 4 standard defects or their equivalent.

NO. 2 WHITE MAPLE—No. 2 White Maple must be 4 inches and over wide, 8 feet and over long.

One face and two edges must be white, and the reverse face must be at least 50% white.

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Standard defects are admitted in widths 6 inches and over according to surface measure as follows:

4 and 5 inch pieces must be clear.

6 feet, 1 standard defect or its equivalent.

9 feet, 2 standard defects or their equivalent.

13 feet, 3 standard defects or their equivalent.

18 feet and over, 4 standard defects or their equivalent.

NO 1 COMMON WHITE MAPLE—

Two sides and two edges must be white.

No. 1 Common White Maple must be 4 inches and over wide, 6 feet and over long.

Pieces 4 inches wide, 6 and 7 feet long must be clear.

Pieces 4 inches wide, 8 to 11 feet long, must work two-thirds clear face in not over two pieces.

Pieces 4 inches wide, 12 feet and over long, must work two-thirds clear face in not over three pieces.

In pieces 4 inches wide, no piece of cutting considered which is less than 2 feet long by the full width of the piece.

Pieces 5 inches and over wide, 6 to 11 feet long must work two-thirds clear face in not over two pieces.

Pieces 5 inches and over wide, 12 feet and over long, must work two-thirds clear face in not over three pieces.

In pieces 5 inches and over wide, no piece of cutting considered which is less than 4 inches wide and two feet long, or 3 inches wide and 3 feet long.

NO. 2 COMMON WHITE MAPLE—

One face and two edges must be white, and the reverse face must be at least 50% white.

No. 2 Common White Maple must be 4 inches and over wide, 6 feet and over long.

Pieces 4 inches wide, 6 and 7 feet long must be clear.

Pieces 4 inches wide, 8 to 11 feet long, must work two-thirds clear face in not over two pieces.

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Pieces 4 inches wide, 12 feet and over long, must work two-thirds clear face in not over three pieces.

In pieces 4 inches wide, no piece of cutting considered which is less than 2 feet long by the full width of the piece.

Pieces 5 inches and over wide, 6 to 11 feet long must work two-thirds clear face in not over two pieces.

Pieces 5 inches and over wide, 12 feet and over long, must work two-thirds clear face in not over three pieces.

In pieces 5 inches and over wide, no piece of cutting considered which is less than 4 inches wide and two feet long, or 3 inches wide and 3 feet long.

STRIP INSPECTION.

Inspection must be made from the good face of the piece.

ASH, BASSWOOD, BEECH, BIRCH, BUTTERNUT, MAPLE, SOFT ELM AND SYCAMORE.

Grades: Clear, No. 1 Common and No. 2 Common.

Widths: 2, 2½, 3, 3½, 4, 4½, 5, 5½ inches.

Lengths: 6 feet and over.

Thicknesses: 1 and 1¼ inches.

CLEAR STRIPS—

Lengths, 8 to 16 feet.

Widths, 2" to 5½" (inclusive).

Thicknesses, 1" and 1¼".

Clear Strips must have one clear face and two good edges. The reverse face must be sound.

NO. 1 COMMON STRIPS—

Lengths, 6 to 16 feet.

Widths, 2" to 5½" (inclusive).

Pieces 2", 2½" and 3" wide, 6 and 7 feet long, must have one clear face and 2 good edges.

Pieces 2", 2½" and 3" wide, 8 to 11 feet long, must work 66 2-3% clear face in not over two pieces; pieces 2", 2½" and 3" wide, 12 feet and over long, must work 66 2-3%

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clear face in not over three pieces. No cutting to be considered which is less than 2 feet long by the full width of the piece.

Pieces $3\frac{1}{2}$ ", 4", $4\frac{1}{2}$ ", 5" and $5\frac{1}{2}$ " wide, 6 and 7 feet long, must have one clear face and two good edges. The reverse face must be sound.

Pieces $3\frac{1}{2}$ ", 4", $4\frac{1}{2}$ ", 5" and $5\frac{1}{2}$ " wide, 8 to 11 feet long, must work 66 2-3% clear face in not over two pieces; pieces $3\frac{1}{2}$ ", 4", $4\frac{1}{2}$ ", 5" and $5\frac{1}{2}$ " wide, 12 feet and over long, must work 66 2-3% clear face in not over three pieces. No cutting to be considered which is less than 3" wide and 2 feet long. Both edges of the cutting in this grade must be good, and the reverse face of cuttings must be sound.

NO. 2 COMMON STRIPS—

Lengths, 6 to 16 feet.

Widths, 2" to $5\frac{1}{2}$ " (inclusive).

No. 2 Common Strips must work 50% clear face; no cutting to be considered which is less than 2" wide by 2 feet long. The reverse face of cuttings must be sound.

CLEAR CHERRY STRIPS grade as above, excepting that no sap is admitted on the face side of the piece.

NO. 1 COMMON CHERRY STRIPS are to be graded the same as Ash, etc., excepting that cuttings must have one red face.

NO. 2 COMMON CHERRY STRIPS are to be graded the same as Ash, etc., bright sap being no defect.

CLEAR PLAIN AND QUARTERED OAK STRIPS grade as above, excepting that 2, $2\frac{1}{2}$ and 3-inch pieces will admit of $\frac{1}{2}$ inch of bright sap, $3\frac{1}{2}$, 4 and $4\frac{1}{2}$ -inch pieces will admit of $\frac{3}{4}$ -inch of bright sap, and 5 and $5\frac{1}{2}$ -inch pieces will admit of 1-inch of bright sap in the aggregate on the face side.

CLEAR PLAIN AND QUARTERED OAK SAP STRIPS grade as above, excepting that bright sap is no defect.

NO. 1 COMMON PLAIN AND QUARTERED OAK STRIPS are to be graded the same as Ash, etc., bright sap being no defect.

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NO. 2 COMMON PLAIN AND QUARTERED OAK STRIPS are to be graded the same as Ash, etc., bright sap being no defect.

POPLAR STRIPS—

Grades: Clear, Sap, No. 1 Common and No. 2 Common.

Widths: 2½, 3, 3½, 4, 4½, 5, 5½ and 6 inches.

Lengths: 6 to 16 feet.

Thicknesses: 1 and 1¼ inches.

Clear strips must be 8 feet and over long and must be clear excepting 1 inch of bright sap showing on one face.

Sap strips must be 8 feet and over long and must be clear excepting bright sap is no defect, and in the absence of sap will admit one sound standard defect or its equivalent.

No. 1 Common Strips must be 6 feet and over long. Sound discolored sap is no defect, 6 and 7 feet lengths must be clear. 8 to 11 feet lengths must work two-thirds clear in not over two pieces. 12 feet and over long must work two-thirds clear in not over 3 pieces. No piece of cutting to be considered which is less than 2 feet long by the full width of the piece.

No. 2 Common Strips must be 6 feet and over long and must work 50% clear face; no cutting to be considered which is less than 2" wide by 2 feet long. The reverse face of cuttings must be sound. Sound discolored sap is no defect.

PANEL AND WIDE NO. 1—

POPLAR, COTTONWOOD AND GUM.

Lengths, 6 to 16 feet.

Widths, 18" and over.

Thicknesses, ¾" to 2".

Bright sap is no defect and not to exceed 3" sound discolored sap on each edge in the aggregate may be admitted on any piece.

Sound discolored sap is no defect in Gum.

Splits not exceeding 6" in length in one end of the piece are not to be considered as defects.

Panel and wide No. 1 is a combined grade and must contain at least 50% panel.

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PANEL—

Lengths 8 to 16 feet, admitting not to exceed 20% of 8, 9 and 10 feet lengths.

50% of the total quantity must be clear on both sides. The balance of the quantity may contain defects, provided 90% of the piece can be used for panels in cuttings 4 feet or over long by the full width of the piece.

WIDE NO. 1—

Lengths: 6 to 16 feet.

Pieces 6 and 7 feet long must be clear.

Pieces 8 feet and over long will admit defects provided 75% of the piece can be used for panels in cuttings 4 feet or over long by the full width of the piece.

ASH—Lengths of 18 feet and over will admit 5 inch pieces in Firsts and Seconds.

DIMENSION STOCK.

Dimension stock for furniture and other purposes where these rules do not apply, shall be subject to contract between buyer and seller; where arbitration is necessary, inspector must be furnished with the specifications and contract in writing signed by buyer and seller.

Common Dimension.

Dimension-sawn common oak plank and timbers used for car and building purposes, must be free from wind shake, dry rot, rotten knots or defects which impair the strength of the piece. Tight hearts, well boxed, in this material shall be considered no defect.

NO. 1 BRIDGE PLANK—No. 1 Bridge Plank must be 6 inches and over wide, 8 feet and over long.

Two inch and thicker may be one-fourth of an inch scant in thickness except when otherwise specified. One face and two edges must be sound, excepting that slight wane, sound heart and an occasional grub or knot-hole will be accepted.

The reverse face may contain defects that do not seriously impair the strength of the piece in working its full width and length.

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NO. 2 BRIDGE PLANK—No. 2 Bridge Plank may contain all pieces not up to the grade of No. 1 Bridge Plank, but there must not be more than 25% waste in any piece.

COMMON TIMBERS—Common Timbers for building and other purposes will admit wane not exceeding one-fifth the width of the face of the piece, and not more than one-third the length of the piece, on one or two corners, or its equivalent on one face. Will admit boxed heart or sound tight heart exposed on one face; will admit shake extending not over one-sixth the length of the piece, pin worm holes, knots, splits and other defects that do not impair the strength of the piece in working its full width and length, for the purpose intended. Season checks are no defects.

PLAIN SAWN FLITCH—Lumber shall be graded according to the general rule applying to the kind of lumber inspected, with the exception that it must be measured on the narrow or sap side in the center of the piece between the wane or bark, and graded into any of the grades of No. 3 Common and Better, to which its quality entitles it. There is no restriction to heart in the grades of common.

This rule does not apply to Veneer Flitch.

HARDWOOD LATH—No. 1 should measure 2 inches in thickness to every five lath green, the minimum thickness of any one lath shall not be less than 5-16 of an inch, green, and should not be less than 1 7-16 inches in width, green, length 4 feet. 1 1/2 inches thickness to every 5 lath, dry, and should not measure less than 1 5-16 inches in width, dry. Will admit wane 1/2 of an inch deep, 1/4 of an inch on face and 6 inches long, pin worm holes and one pin knot. Must not be more than 1/2 of an inch scant in length. Sound discolored sap shall not be considered a defect.

No. 2 shall consist of pieces that fall below the grade of No. 1 which are not less than 1 1/4 inches in width, 1/4 of an inch thick, when dry, and are not more than 3/4 inch short in length. Will admit wane; worm holes; knots and other defects that will not prevent their use the entire length without waste.

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STANDARD INSPECTION

ASH, BEECH, BIRCH, HARD MAPLE, AND SYCAMORE.

Grades, thicknesses and lengths: standard.

Widths: 3" and over.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure may have one standard defect or its equivalent. Pieces 16 feet and over, surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 3" and over wide, 4 feet and over long. Not over 30% shorter than 10 feet, and not to exceed 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 4 and 5 feet long must be clear.

Pieces 3 and 4" wide, 6 and 7 feet long must be clear.

Pieces 3" wide, 8 to 11 feet long, must work 66 2/3% clear face in not over two cuttings; pieces 3" wide, 12 to 16 feet long, must work 66 2/3% clear face in not over three

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cuttings. No cutting to be less than 3 feet long by the full width of the piece.

Pieces 4" wide, 8 to 11 feet long, must work $66\frac{2}{3}\%$ clear face in not over two cuttings; pieces 4" wide, 12 to 16 feet long, must work $66\frac{2}{3}\%$ clear face in not over three cuttings. No cutting to be less than 2 feet long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5" to 7" wide, 7 to 11 feet long must work $66\frac{2}{3}\%$ clear face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long must work $66\frac{2}{3}\%$ clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work $66\frac{2}{3}\%$ clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work $66\frac{2}{3}\%$ clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work $66\frac{2}{3}\%$ clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% clear face in not over three cuttings; pieces 3 to 7" wide, 11 feet and over long, must work 50% clear face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by 2 feet long.

WORMY BEECH.

Shall be graded according to the rule for Beech No. 2 Common and Better, with the exception that pin worm holes shall not be considered a defect.

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NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

RED BIRCH.

Grades: Firsts, Seconds, No. 1 Commons.

Lengths: Standard.

Thicknesses: Standard.

Widths: 3 inches and over.

In the grade of Firsts and Seconds, pieces 5 inches wide must be all red one face, pieces 6 inches and over wide must not be less than seventy-five per cent red one face.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure, must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 5" and over wide.

Standard defects are admitted in widths 6 inches and over, according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMON RED BIRCH—

No 1 Common must be 3" and over wide, 4 feet and over long. Not over 30% shorter than 10 feet, and not to exceed 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 4 and 5 feet long must be clear red face.

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Pieces 3 and 4" wide, 6 and 7 feet long must be clear red face.

Pieces 3" wide, 8 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 3" wide, 12 to 16 feet long, must work 66⅔% clear red face in not over three cuttings. No cutting to be less than 3 feet long by the full width of the piece.

Pieces 4" wide, 8 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 4" wide, 12 to 16 feet long, must work 66⅔% clear red face in not over three cuttings. No cutting to be less than 2 feet long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects. Pieces 6 feet long must have one red face.

Pieces 5" to 7" wide, 7 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long, must work 66⅔% clear red face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear red face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

BASSWOOD, SOFT ELM, SOFT MAPLE AND BUCKEYE.

Grades, Thicknesses and Lengths: Standard.
Widths: 3 inches and over.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard de-

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fect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 3" and over wide, 4 feet and over long. Not over 30% shorter than 10 feet, and not to exceed 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 4 and 5 feet long must be clear.

Pieces 3 and 4" wide, 6 and 7 feet long must be clear.

Pieces 3" wide, 8 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 3" wide, 12 to 16 feet long, must work 66⅔% clear face in not over three cuttings. No cutting to be less than 3 feet long by the full width of the piece.

Pieces 4" wide, 8 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 4" wide, 12 to 16 feet long, must work 66⅔% clear face in not over three cuttings. No cutting to be less than 2 feet long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide may have one standard defect; pieces 6 feet long, 9" and over wide may have two standard defects.

Pieces 5" to 7" wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over

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long, must work 66⅔ % clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔ % clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔ % clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66⅔ % clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% sound in not over three cuttings; pieces 3 to 7" wide, 11 feet and over long, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50 % sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by 2 feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

NOTE—Black spots or black streaks are defects, and inspectors must be careful in estimating their damage. If excessive, they will reduce the piece one or more grades.

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fect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 3" and over wide, 4 feet and over long. Not over 30% shorter than 10 feet, and not to exceed 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 4 and 5 feet long must be clear.

Pieces 3 and 4" wide, 6 and 7 feet long must be clear.

Pieces 3" wide, 8 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 3" wide, 12 to 16 feet long, must work 66⅔% clear face in not over three cuttings. No cutting to be less than 3 feet long by the full width of the piece.

Pieces 4" wide, 8 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 4" wide, 12 to 16 feet long, must work 66⅔% clear face in not over three cuttings. No cutting to be less than 2 feet long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide may have one standard defect; pieces 6 feet long, 9" and over wide may have two standard defects.

Pieces 5" to 7" wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over

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long, must work 66⅔% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% sound in not over three cuttings; pieces 3 to 7" wide, 11 feet and over long, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by 2 feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

NOTE—Black spots or black streaks are defects, and inspectors must be careful in estimating their damage. If excessive, they will reduce the piece one or more grades.

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BAY POPLAR (TUPELO), MAGNOLIA AND BLACK GUM.

Grades, Thicknesses and Lengths: Standard.

Width: 3 inches and over.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure, must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Sound discolored sap is no defect.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 foot lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long, must be clear.

Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7" wide, 7 to 11 feet long, must

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work 66⅔% clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long, must work 66⅔% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

There is no restriction as to heart in No. 2 Common Bay Poplar.

Sound discolored sap is no defect.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% sound in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

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CHERRY.

Grades, Thicknesses and Lengths: Standard.

Widths: 3 inches and over.

One inch of bright sap in the aggregate is a standard defect in the grade of Firsts and Seconds.

Note.—In the common grades color shall be determined from the red side.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 3" and over wide, 4 feet and over long.

Pieces 4 and 5 feet long, must be clear red face.

Pieces 3 and 4" wide, 6 and 7 feet long, must be clear red face.

Pieces 3" wide, 8 to 11 feet long, must work 66% clear red face in not over two cuttings; pieces 3" wide, 12 to 16 feet long, must work 66% clear red face in not over three cuttings. No cutting to be less than 3 feet long by the full width of the piece.

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Pieces 4" wide, 8 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 4" wide, 12 to 16 feet long, must work 66⅔% clear red face in not over three cuttings. No cutting to be less than 2 feet long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects. Pieces 6 feet long must have one red face.

Pieces 5" to 7" wide, 7 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long, must work 66⅔% clear red face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear red face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear red face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

Each piece of cutting must have one clear red face and not to exceed one-half bright sap in the aggregate on the reverse side. Not over 10% of 4, 5, 6 and 7-foot lengths admitted in this grade.

NO. 2 COMMONS.

There is no restriction as to heart in No. 2 Commons.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% clear red face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer, must work 50% clear red face in not over four cuttings.

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Pieces 8" and over wide, 4 to 9 feet long, must work 50% clear red face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% clear red face in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% clear red face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long. Bright sap is no defect on reverse face of cutting.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

NOTE—Inspectors are cautioned to be careful in estimating the damage of gum spots in grading cherry. If excessive, they will reduce the board one or more grades. Gum spots are no defect in the No. 2 Common grade.

CHESTNUT.

Grades: Firsts, Seconds, No. 1 Commons, No. 2 Commons, No. 3 Commons, and Wormy.

Lengths and Thicknesses: Standard.

Widths: 3 inches and over.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

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12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1. COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 foot lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long, must be clear.

Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long, must work 66⅔% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% sound in not over three cuttings;

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pieces 3 to 7" wide, 11 feet and longer, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings $1\frac{1}{2}$ ", and no cutting considered which contains less than 36 square inches.

Wormy.

Worm holes admitted in this grade without limit.

No piece shall contain heart to exceed three-fourths its length in the aggregate.

Wormy chestnut must be 4 inches and over wide, 6 feet and over long. Pieces 4 inches wide, 6 and 7 feet long, must be sound; 8 to 11 feet long, must work 66% sound in not over two pieces; 12 feet and over long, must work 66% sound in not over three pieces. No piece of cutting to be less than 2 feet long by the full width of the piece.

Pieces 5 inches and over wide, 6 to 11 feet long, must work 66% sound in not over two pieces; 12 feet and over long, must work 66% sound in not over three pieces.

No piece of cutting considered which is less than 4 inches wide and 2 feet long, or 3 inches wide and 3 feet long.

Not over 10 per cent of 6, 7 and 8-foot lengths admitted in this grade.

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COTTONWOOD AND WILLOW.

Grades, Thicknesses and Lengths: Standard.

Widths: 3 inches and over.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure, must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider.

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long, must be clear.

Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet

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and over long, must work 66% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by 3 feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 foot lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% sound in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3 inches and over wide, 4 feet and over long, and must contain at least 25 per cent of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

ROCK ELM, HICKORY AND PECAN.

Grades and thicknesses: Standard.

Lengths: Standard, excepting that in the grade of firsts and seconds, 30% may be 10 feet and shorter.

Widths: 3" and over.

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Firsts and Seconds.

Firsts and Seconds are combined as one grade.

Bird pecks not exceeding $\frac{1}{2}$ " in length, $\frac{1}{4}$ " in width, admitted if sound; but if excessive, must be considered by the inspector.

Widths, 4" and over wide.

Standard defects admitted (in pieces 5" and over wide) according to surface measure, as follows:

Pieces 4" wide must be clear.

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

18 feet, four standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 4" and over wide, 4 feet and over long. Pieces 4 and 5 feet long must be clear.

Pieces 4 to 7" wide, 6 to 11 feet long, must work 66 $\frac{2}{3}$ % clear face in not over two cuttings; pieces 4 to 7" wide, 12 feet and over long, must work 66 $\frac{2}{3}$ % clear face in not over three cuttings.

Pieces 8" and over wide, 6 to 9 feet long, must work 66 $\frac{2}{3}$ % clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66 $\frac{2}{3}$ % clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66 $\frac{2}{3}$ % clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide, by 2 feet long, or 3" wide by 3 feet long.

NO. 2 COMMONS.

There is no restriction as to heart in the grade of No. 2 Commons.

Bird pecks are no defect in this grade.

No. 2 Commons must be 3" and over wide, 4 feet and over long.

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Pieces 3 to 7" wide, 4 to 11 feet long, must work 50% sound in not over three cuttings; pieces 3" to 7" wide, 12 feet and over long, must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% sound in not over four cuttings. Pieces 8" and over wide, 14 feet and over long, must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by 2 feet long.

NO. 3 COMMONS

No. 3 Commons must be 3" and over wide, 4 feet and over long, and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

PLAIN RED GUM.

Grades, Lengths and Thicknesses: Standard.

Widths: 3 inches and over.

In Firsts and Seconds, pieces may have 1 inch of sap in the aggregate on one face, and not to exceed one-fifth in the aggregate on the reverse face.

Note.—In the common grades color shall be determined from the red face.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure, must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

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8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear red face.

Pieces 4" wide, 6 and 7 feet long, must be clear red face.

Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear red face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 6 feet long must have one red face.

Pieces 5 to 7 inches wide, 7 to 11 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long, must work 66⅔% clear red face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long, must work 66⅔% clear red face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 66⅔% clear red face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear red face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade

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Pieces 3 to 7" wide, 4 to 10 feet long, must work 50% clear red face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% clear red face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long, must work 50% clear red face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% clear red face in not over four cuttings; pieces 8" and over width, 14 feet and over long, must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

SAP GUM.

Grades, Lengths and Thicknesses: Standard.

Widths: 3 inches and over.

Sound discolored sap is no defect in any grade.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure, must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

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NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long, must be clear.

Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear face in not over two pieces in cuttings 2 feet and over long, by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7" wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long, must work 66⅔% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% sound in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% sound in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long must work 50% sound in not over four

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cuttings; pieces 8" and over wide, 14 feet and over long must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

QUARTERED RED GUM.

Grades: Firsts, Seconds, No. 1 Commons and No. 2 Commons.

Lengths: Standard.

Thickness: Standard.

Widths: 3 inches and over.

No figure is required in Quartered Red Gum in any grade.

80% of the width of each piece must have the radial grain running 45 degrees or less with one surface of the piece.

In the grade of Firsts and Seconds, pieces 5 inches wide must be free of sap, pieces 6 and 7 inches wide may have ¾ inch sap in the aggregate and pieces 8 inches and over wide may have 1 inch sap in the aggregate.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 5 inches and over wide.

Standard defects are admitted in widths 6 inches and over according to surface measure as follows:

5 inch pieces must be clear.

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5 feet, 1 standard defect or its equivalent.
8 feet, 2 standard defects or their equivalent.

12 feet, 3 standard defects or their equivalent.

16 feet, 4 standard defects or their equivalent.

20 feet and over, 5 standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear red face.

Pieces 4" wide, 6 and 7 feet long must be clear red face.

Pieces 4" wide, 8 to 16 feet long must work 66⅔% clear red face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects. Pieces 6 ft. long must have one red face.

Pieces 5 to 7 inches wide, 7 to 11 feet long must work 66⅔% clear red face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long must work 66⅔% clear red face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work 66⅔% clear red face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66⅔% clear red face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66⅔% clear red face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

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NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% clear red face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% clear red face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% clear red face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long must work 50% clear red face in not over four cuttings; pieces 8" and over wide, 14 feet and over long must work 50% clear red face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

QUARTERED RED GUM, SAP NO DEFECT.

Grades: Firsts, Seconds, No. 1 Commons and No. 2 Commons.

Lengths: Standard.

Thicknesses: Standard.

Widths: 3 inches and over.

No figure is required in Quartered Gum in any grade.

Eighty per cent of the width of each piece must have the radial grain running 45 degrees or less with one surface of the piece.

Sound discolored sap is no defect in any grade.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalents.

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Seconds.

- Seconds must be 5 inches and over wide.
- Standard defects are admitted in widths 6 inches and over according to surface measure as follows:
 - 5 inch pieces must be clear.
 - 5 feet, 1 standard defect or its equivalent.
 - 8 feet, 2 standard defects or their equivalent.
 - 12 feet, 3 standard defects or their equivalent.
 - 16 feet, 4 standard defects or their equivalent.
 - 20 feet and over, 5 standard defects or their equivalent.

No. 1 COMMONS.

- Widths 4" and wider:
 - Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.
 - Pieces 4 and 5 feet long must be clear.
 - Pieces 4" wide, 6 and 7 feet long, must be clear.
 - Pieces 4" wide, 8 to 16 feet long, must work 66⅔% clear face in not over two pieces in cuttings 2 feet and over long, by the full width of the piece.
 - Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.
 - Pieces 5 to 7" wide, 7 to 11 feet long, must work 66⅔% clear face in not over two cuttings; pieces 5 to 7" wide, 12 feet and over long, must work 66⅔% clear face in not over three cuttings.
 - Pieces 8" and over wide, 7 to 9 feet long must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66⅔% clear face in not over four cuttings.
 - No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

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NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long, but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% clear face in not over three cuttings; pieces 3 to 7" wide, 11 feet and over long must work 50% clear face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long, must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long, must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by 2 feet long.

MEXICAN AND AFRICAN MAHOGANY.

Grades: Firsts, Seconds, Selects, No. 1 Commons, No. 2 Commons, Wormy Shorts and Counters.

Lengths: 2 feet and over.

Thicknesses: Standard.

Widths: 3 inches and over.

All odd lengths must be measured, and fractions of over $\frac{1}{2}$ foot in length must be counted up, and fractions of $\frac{1}{2}$ foot and less in length must be dropped. This does not apply to the grade of shorts.

One inch of bright sap in the aggregate is a standard defect.

Firsts.

Firsts must be 7 inches and over wide, 10 feet and over long, and free from all defects, excepting that pieces 10 feet and over surface measure may have one standard defect or its equivalent.

Seconds.

Seconds must be 6 inches and over wide.

Standard defects are admitted according to surface measure as follows:

6 feet, 1 standard defect or its equivalent.

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9 feet, 2 standard defects or their equivalent.

13 feet, 3 standard defects or their equivalent.

18 feet and over, 4 standard defects or their equivalent. For each additional 5 feet surface measure, one additional standard defect will be admitted.

Selects.

Selects must be 6" and over wide and must grade Firsts and Seconds on one face. The reverse face must not be below the grade of No. 1 Commons.

NO. 1 COMMONS.

No. 1 Commons must be 4 inches and over wide, 6 feet and over long.

Pieces 4 inches wide, 6 to 11 feet long, must work 66⅔% clear face in not over two pieces, 12 feet and over long must work 66⅔% clear face in not over three pieces. No piece of cutting to be less than 2 feet long by the full width of the piece.

Pieces 5 inches and over wide, 6 to 11 feet long, must work 66⅔% clear face in not over two pieces; 12 feet and over long must work 66⅔% clear face in not over three pieces. Each additional 4 feet in length in pieces over 16 feet long will admit one additional cutting. No piece of cutting to be considered which is less than 4 inches wide and 2 feet long, or 3 inches wide and 3 feet long.

NO. 2 COMMONS.

There shall be no restriction to heart in this grade.

No. 2 Commons must be 3 inches and over wide, 2 feet and over long, and must work 50 per cent clear face. No piece of cutting considered which is less than 3 inches wide and 2 feet long.

Wormy.

Worm holes admitted without limit. Otherwise to grade the same as No. 1 Commons.

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Shorts.

Shorts must be 4 inches and over wide, 2 to 5 feet long.

Pieces 4 and 5 inches wide must be clear.

In pieces 6 inches and over wide standard defects are admitted according to surface measure as follows:

2 feet, 1 standard defect or its equivalent.

4 feet, 2 standard defects or their equivalent.

5½ feet, 3 standard defects or their equivalent.

6½ feet and over, 4 standard defects or their equivalent.

Counters.

Counters must be 12 feet to 40 feet long, 18" to 24" wide, and must be free from all defects one face; the reverse face must not grade below firsts and seconds. Splits measured out.

CUBAN MAHOGANY.

Grades: Prime, Selects, Rejects, Shorts, Wormy, Counters and Clear Strips.

Lengths: 2 feet and over.

Widths: 3 inches and over.

Thicknesses: Standard.

All odd lengths must be measured, and fractions of over ½ foot in length must be counted up, and fractions of ½ foot and less in length must be dropped.

Prime.

Prime must be 6 inches and over wide, 8 feet and over long, not to exceed 25 per cent of 8 and 9-foot lengths.

Standard defects are admitted according to widths as follows:

6 and 7 inches, 1 standard defect or its equivalent.

8 and 9 inches, 2 standard defects or their equivalent.

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10 and 11 inches, 3 standard defects or their equivalent.

12 inches and over, 4 standard defects or their equivalent.

Selects.

Selects must be 4 inches and over wide, 6 feet and over long, and must work two-thirds clear, with no cutting less than 4 inches wide and 3 feet long, or 3 inches wide and 4 feet long.

Rejects.

There shall be no restriction to heart in this grade.

Rejects must be 3 inches and over wide, 6 feet and over long, and must work 50 per cent clear. No piece of cutting considered which is less than 4 inches wide and 2 feet long, or 3 inches wide and 3 feet long.

Shorts.

Shorts must be 3 inches and over wide, 2 to 7 feet long, and must be prime in quality.

Pieces 3, 4 and 5 inches wide must be clear.

Pieces 6 inches and over wide must be graded as Prime.

Wormy.

This grade is to be the same as selects, excepting that worm holes are admitted without limit.

Counters.

Counters must be 12 feet to 40 feet long, 18 inches to 24 inches wide, and must be free from all defects one face; the reverse face must not grade below prime. Splits measured out.

Clear Strips.

Clear strips must be $2\frac{1}{2}$ to $5\frac{1}{2}$ inches wide, 5 feet and over long, clear of defects on one face and two edges. Reverse face must be sound.

PLAIN-SAWN RED AND WHITE OAK AND LOCUST.

Grades: Firsts, Seconds, No. 1 Commons, No. 2 Commons, Wormy and No. 3 Commons.

Lengths and Thicknesses: Standard.

Widths: 3 inches and over.

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In the grade of Firsts and Seconds, pieces 6 and 7 inches wide, bright sap up to one-third the width of the piece in the aggregate on one face is no defect; in pieces 8 inches and over wide bright sap on one face is no defect. On the reverse face 1 inch of bright sap in the aggregate is no defect. Each additional 1 inch of bright sap in the aggregate must be considered as one standard defect.

Bright sap is no defect in the Common grades.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long must be clear.

Pieces 4" wide, 8 to 16 feet long must work 66 2/3 % clear face in not over two pieces in

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cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long must work 66⅔% clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long must work 66⅔% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work 66⅔% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66⅔% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long, must work 66⅔% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% clear face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% clear face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

Wormy.

This grade is the same as No. 1 Commons, excepting that worm holes are considered no defect.

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NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

Note—Streaks in plain-sawn oak are defects, and if excessive, inspectors are cautioned to be careful in estimating their damage, as often they will reduce a piece in grade.

QUARTER-SAWN RED AND WHITE OAK.

Grades, Lengths and Thicknesses: Standard.

Widths: 3 inches and over.

In the grade of Firsts and Seconds, one inch of bright sap in the aggregate is no defect; each additional 1 inch of bright sap in the aggregate must be considered as one standard defect.

Bright sap is no defect in the Common grades.

Ten per cent of quartered oak may be $\frac{1}{16}$ " scant on the heart edge provided the sap edge is full standard thickness when shipping dry.

Firsts and Seconds Quarter-Sawn Oak must show figure on one face not less than 90% in the aggregate. The cuttings in No. 1 Commons and No. 2 Commons must show figure on one face.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalent.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

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5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 6 and 7 feet long, must be clear.

Pieces 4" wide, 8 to 16 feet long must work 66% % clear face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long must work 66% % clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long must work 66% % clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work 66% % clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66% % clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66% % clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long but not more than 10% of 4 and 5 feet lengths admitted in this grade.

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Pieces 3 to 7" wide, 4 to 10 feet long must work 50% clear face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% clear face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

Note—Streaks in quarter-sawn oak are defects, and if excessive, inspectors are cautioned to be careful in estimating their damage, as often they will reduce the piece in grade.

POPLAR.

Grades: Firsts and Seconds, Saps, Selects, Stained Sap, No. 1 Commons No. 2-A Commons, No. 2-B Commons and No. 3 Commons.

Lengths and thicknesses standard.

Widths 3" and over.

No. 2-A Commons and No. 2-B Commons are a combined grade unless otherwise specified.

In the grade of Firsts and Seconds pieces 10" and wider, bright sap up to one-third the width of the piece in the aggregate on one face is no defect; each additional 1" of bright sap in the aggregate is one standard defect; 1" of bright sap in the aggregate on the reverse face is no defect; each additional 1" of bright sap in the aggregate is one standard defect.

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Firsts.

Firsts must be 8" and over wide, 10 feet and over long.

Pieces 8 and 9" wide must be free of sap on one face. The reverse face may have 2" of bright sap in the aggregate.

Pieces 13 to 16 feet surface measure will admit one standard defect or its equivalent.

Pieces 17 feet and over surface measure, will admit two standard defects or their equivalent.

Seconds.

Must be 6" and over wide, 8 feet and over long.

Pieces 6" wide must be free from defects including sap.

Pieces 7" wide will admit 1" of bright sap in the aggregate.

Pieces 8" and 9" wide, 5 to 7 feet surface measure will admit 1" of bright sap in the aggregate.

Pieces 8 and 9" wide, 8 feet and over surface measure, will admit one standard defect and 1" of bright sap in the aggregate, or 2" of bright sap in the aggregate, if there is no other defect.

Pieces 10" and over wide, 6 to 9 feet surface measure may have one standard defect or its equivalent.

Pieces 10" and over wide, 10 to 14 feet surface measure, may have two standard defects or their equivalent.

Pieces 15 to 20 feet surface measure, may have three standard defects or their equivalent.

Pieces 21 feet and over surface measure, may have four standard defects or their equivalent.

SAPS.

Saps must be 5" and wider, 8 feet and longer.

5" pieces must be clear.

On pieces 6" and over wide, wane along the edge or its equivalent at one end or both ends, not exceeding one-sixth of

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length of the piece, not exceeding in thickness one-half the thickness of the piece, and not exceeding 1" in width, shall not be considered a defect.

Pieces 5 to 8" wide must be clear, excepting one straight split not exceeding in length the width of the piece.

Pieces 9" and over wide may have one standard defect.

NOTE—Stain covered by general instructions.

Selects.

Selects must be 6" and over wide, 8 feet and over long, and must grade Firsts and Seconds on best face, the reverse face not to be below the grade of No. 1 Commons.

Stained Saps.

This grade is the same as saps, excepting that any amount of sound discolored sap is admitted.

NO. 1 COMMONS.

Slightly discolored sap is no defect in this grade.

Widths, 4" and wider, but not more than 15% may be 4" and 5" widths.

Lengths, 6 to 16 feet, but not more than 20% may be under 10 feet, and not to exceed 10% of 6 and 7 feet.

Pieces 4" wide, 6 and 7 feet long, must be clear; pieces 4" wide, 8 to 16 feet long may have one standard defect.

Pieces 5" wide, 6 to 7 feet long must be clear; pieces 5" wide, 8 to 16 feet long, must work 66⅔% clear face, in not over two cuttings.

Pieces 6" and over wide, 6 and 7 feet long, may have one standard defect.

Pieces 6 to 9" wide, 8 to 11 feet long, must work 66⅔% clear face in not over two pieces; pieces 6 to 9" wide, 12 feet and over long, must work 66⅔% clear face in not over three pieces.

Pieces 10" and over wide, 8 and 9 feet long, must work 66⅔% clear face in not over two pieces.

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Pieces 10" and over wide, 10 to 13 feet long must work 66% clear face in not over three pieces; pieces 10" and over wide, 14 feet and over long, must work 66% clear face in not over four pieces.

No cutting to be considered which is less than 4" wide by 2 feet long or 3" wide by 3 feet long.

NO. 2 COMMONS.

No. 2 Commons is divided into No. 2-A Commons and No. 2-B Commons, but unless otherwise specified is to be considered as a combined grade.

NO. 2-A COMMONS.

Sound discolored sap is no defect in this grade.

No. 2-A Commons must be 4" and over wide, 4 ft. and over long, but not more than 10% of 4 and 5 foot lengths admitted in this grade. Pieces 4" to 7" wide, 4 to 10 ft. long must work 50% clear face in not over three cuttings: pieces 4" to 7" wide, 11 ft. and longer must work 50% clear face in not over four cuttings.

Pieces 8" and over wide 4 to 9 ft. long must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 ft. long must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 2B COMMONS.

No. 2-B Commons must be 4" and over wide, 4 ft. and over long, but not more than 10% of 4 and 5 foot lengths admitted in this grade.

Pieces 4" to 7" wide, 4 to 10 ft. long, must work 50% sound in not over three cuttings. Pieces 4" to 7" wide, 11 ft. and longer must work 50% sound in not over four cuttings.

Pieces 8" and over wide, 4 to 9 ft. long

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must work 50% sound in not over three cuttings. Pieces 8" and over wide, 10 to 13 ft. long must work 50% sound in not over four cuttings. Pieces 8" and over wide, 14 ft. and over long must work 50% sound in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

QUARTER-SAWN POPLAR.

Grades: Firsts and Seconds and No. 1 Commons.

Lengths and Thicknesses: Standard.

Widths: 4 inches and over.

Firsts and Seconds.

Firsts and Seconds are a combined grade and must be 5 inches and over wide. Standard defects are admitted according to surface measure as follows:

6 feet, 1 standard defect or its equivalent.

9 feet, 2 standard defects or their equivalent.

13 feet, 3 standard defects or their equivalent.

18 feet and over, 4 standard defects or their equivalent.

NO. 1 COMMONS.

No. 1 Commons must be 4 inches and over wide, 8 feet and over long.

Pieces 4 inches wide must work 75% clear face in not over two cuttings; pieces 5 inches and over wide, 8 to 11 feet long, must work 75% clear face in not over two cuttings; 12 feet and over long must work 75% clear face in not over three cuttings.

No piece of cutting considered which is less than 4 inches wide and 2 feet long, or 3 inches wide and 3 feet long.

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QUARTER-SAWN SYCAMORE.

Grades, lengths and thicknesses: Standard.

Widths: 3 inches and over.

First and Seconds Quarter-Sawn Sycamore must show figure on one face not less than 90% in the aggregate. The cuttings in No. 1 Commons and No. 2 Commons must show figures on one face.

Firsts.

Firsts must be 6" and over wide, 8 feet and over long. Pieces 4 to 9 feet surface measure must be clear. Pieces 10 to 15 feet surface measure, may have one standard defect or its equivalent. Pieces 16 feet and over surface measure, may have two standard defects or their equivalents.

Seconds.

Seconds must be 6" and over wide.

Standard defects are admitted according to surface measure as follows:

5 feet, one standard defect or its equivalent.

8 feet, two standard defects or their equivalent.

12 feet, three standard defects or their equivalent.

16 feet, four standard defects or their equivalent.

20 feet, five standard defects or their equivalent.

NO. 1 COMMONS.

Widths 4" and wider:

Lengths 4 feet and longer, but not more than 10% may be 4, 5, 6 and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 4" wide, 4 to 7 feet long must be clear.

Pieces 4" wide, 8 to 16 feet long must work 66% clear face in not over two pieces in cuttings 2 feet and over long by the full width of the piece.

Pieces 6 feet long, 5 to 8" wide, may have

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one standard defect; pieces 6 feet long, 9" and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long must work 66% clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long must work 66% clear face in not over three cuttings.

Pieces 8" and over wide, 7 to 9 feet long must work 66% clear face in not over two cuttings; pieces 8" and over wide, 10 to 13 feet long must work 66% clear face in not over three cuttings; pieces 8" and over wide, 14 feet and over long must work 66% clear face in not over four cuttings.

No cutting to be considered which is less than 4" wide by 2 feet long, or 3" wide by three feet long.

NO. 2 COMMONS.

No. 2 Commons must be 3" and over wide, 4 feet and over long but not more than 10% of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7" wide, 4 to 10 feet long must work 50% clear face in not over three cuttings; pieces 3 to 7" wide, 11 feet and longer must work 50% clear face in not over four cuttings.

Pieces 8" and over wide, 4 to 9 feet long must work 50% clear face in not over three cuttings; pieces 8" and over wide, 10 to 13 feet long must work 50% clear face in not over four cuttings; pieces 8" and over wide, 14 feet and over long must work 50% clear face in not over five cuttings.

No cutting to be considered which is less than 3" wide by two feet long.

NO. 3 COMMONS.

No. 3 Commons must be 3" and over wide, 4 feet and over long and must contain at least 25% of sound cuttings. Minimum width of cuttings 1½", and no cutting considered which contains less than 36 square inches.

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WALNUT AND BUTTERNUT.

Grades, lengths and thicknesses: Standard.

Widths: 3 inches and over.

All odd lengths must be measured.

Firsts and Seconds.

Firsts and seconds are a combined grade and must be 6" and over wide, 8 feet and over long, and not to exceed 35 per cent of 8 feet and 9 feet lengths.

Pieces 8 and 9 feet long, 6" and 7" wide, may have one standard defect and $\frac{3}{4}$ " sap in the aggregate.

Pieces 8 and 9 feet long, 8" and 9" wide, may have one standard defect and 1" of sap in the aggregate or 2 standard defects if there is no sap, or 2" of sap if there is no defect.

Pieces 8 and 9 feet long, 10" and over wide, may have 2 standard defects and 2" of sap in the aggregate or 3" of sap if there is no defect.

Pieces 10 feet and over long, 6" and 7" wide may have one standard defect and 1" of sap in the aggregate.

Pieces 10 feet and over long, 8" and 9" wide may have 2 standard defects and 2" of sap in the aggregate.

Pieces 10 feet and over long, 10" and 11" wide may have 3 standard defects and 2" of sap, or 2 standard defects and 3" of sap.

Pieces 10 feet and over long, 12" and over wide, 3 standard defects and 3" of sap, or 4" of sap if there is no defect.

NO. 1 COMMONS.

In the common grades color shall be determined from the black side.

No. 1 Commons must be 4" and over wide, 4 feet and over long.

Pieces 4" and over wide must work 66% clear black face, no piece of cutting to be considered which does not contain 144 square inches. The minimum width of any cutting to be 3", the minimum length of any cut-

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ting to be 24". Each cutting in this grade must have one clear black face, and not to exceed $\frac{1}{2}$ sap in the aggregate on the reverse face.

NO. 2 COMMONS.

There is no restriction as to heart in No. 2 commons. No. 2 commons to admit all lumber up to the grade of No. 1 commons that will cut 50 per cent clear black face in pieces containing 72 or more square inches. The reverse face may be all sap. The minimum widths of any cutting to be 2".

NO. 3 COMMONS.

No. 3 Commons must be 3 inches and over wide, 4 feet and over long, and must contain at least 25 per cent of sound cutting.

Minimum width of cuttings $1\frac{1}{2}$ " and no cutting considered which contains less than 36 square inches.

Note—Walnut ordered for any thicknesses different from the foregoing thicknesses, or for molding strips, clear face squares, chair stock, table top or other dimensions, shall be subject to contract between buyer and seller, and be arbitrated, when necessary, between buyer and seller, by regular authorized inspector, who shall be furnished with conditions of contract.

WAGON STOCK GRADING AND INSPECTION RULES

WAGON BOX BOARDS.

Basswood, Bay Poplar (Tupelo), Cottonwood, Gum, Poplar and Magnolia.

WIDTHS—Wide, 13 to 17 inches. Narrow, 9 to 12 inches.

LENGTHS—12, 14 and 16 feet, but 15% may be 11, 13, 15 feet.

THICKNESS—Must be 1 inch thick when shipping dry.

DEFECTS—Must be free from defects excepting that no objection will be made to bright sap or sound discolored sap; also one sound knot, not to exceed $1\frac{1}{4}$ inches in diameter or its equivalent, showing on one face only. Eleven-foot lengths to be free from splits; 12, 13 and 16-foot lengths will admit of a 12-inch split in one end or its equivalent in both ends; 14 and 15-foot lengths will admit of splits not to exceed 6 inches in one end or its equivalent in both ends.

NOTE—Five per cent in feet of a shipment that can be reduced in measurement by cutting the end or edge or both to a size ordered must be accepted and measured as box boards, separate tally to be kept of such boards, showing reduction in measurement.

NOTE—Inspectors are cautioned that "woolly" cottonwood and lumber so warped that it cannot be used for box boards, must be excluded from this grade.

NOTE—The highest grade established under these rules shall be known commercially as "NO. 1" or "WAGONMAKERS' GRADE."

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NO. 1 OR WAGONMAKERS' GRADE.

AXLES.

To be cut from live tough black or shell bark hickory, cut 6 feet in length, to include all the clear and perfect stock. Defects as follows admissible:

STAIN—Penetrating not more than $\frac{1}{8}$ inch and which has not developed into a rotting condition.

KNOTS—Four sound pin knots not exceeding $\frac{1}{4}$ inch in diameter, or two sound knots $\frac{1}{4}$ inch in diameter, near the center lines longitudinally on top or side, and not over 12 inches of center or more than 6 inches of ends. Knots (except pin knots) not to be closer than 12 inches apart.

SPLITS—On either end, extending not more than 6 inches in axle or 3 inches on both ends.

SEASON CHECKS—Not more than $\frac{1}{2}$ inch deep and not more than 12 inches long.

HEARTS or HEART RINGS—None.

SHAKES—That will plane out with $\frac{1}{2}$ inch cut.

WORMHOLES AND GRUBHOLES—Not more than two pin wormholes not nearer than 6 inches to each other. Not more than two grub holes that will penetrate more than 6 inches at either end of the piece.

BIRD PECKS—Bird pecks allowed if sound, or if unsound part is not to exceed $\frac{1}{2}$ inch in diameter and not over $\frac{1}{4}$ inch in depth.

WANE—Axles with wane will be measured excluding the wane.

SAP—Bright sap considered no defect.

GRAIN—Grain can cross 3 inches in entire length of axle.

DEFECTS REMOVABLE—If defects not admitted can be cut out so as to reduce axle to a smaller size used and ordered by the buyer, it shall be so inspected.

Hewn axles shall be measured to square to the size they are ordered.

Defects at ends of axles that will admit of piece working 5 feet 6 inches long will be admitted.

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BOLSTERS.

To be cut from good, tough, straight-grained Oak or Hickory (when oak is specified it will be understood as being white or red oak) suitable for wagon material. To be clear and perfect stock, excepting the following defects, which will be admissible.

STAIN—Penetrating not more than $\frac{1}{16}$ inch. and which shows no sign of rot.

KNOTS—One sound knot not over $\frac{1}{2}$ inch in diameter, not more than 12 inches from the center of the piece, or three sound pin knots not exceeding $\frac{1}{4}$ inch in diameter located in same manner.

SPLITS—None.

SEASON CHECKS—Not more than $\frac{1}{2}$ inch deep, nor more than 12 inches long.

HEART RINGS—None.

SHAKES—If they can be planed out with $\frac{1}{8}$ inch cut.

WORM HOLES—Not more than six pin worm holes in a Bolster, these holes not to be in clusters of more than three holes 6 inches apart.

BIRD PECKS—Allowed if sound.

WANE—Will be measured excluding the wane.

SAP—Bright sap accepted.

GRAIN—Grain can cross 2 inches in length of Bolster as maximum.

DEFECTS REMOVABLE—If defects not admitted can be cut out so as to reduce Bolster to a smaller size used and ordered by the buyer, it shall be so inspected.

SANDBOARDS.

To be cut from good, tough, straight-grained Oak or Hickory (when Oak is specified it will be understood as being White or Red Oak) suitable for wagon material. To be clear and perfect stock, excepting the following defects which will be admissible:

STAIN—Penetrating not more than $\frac{1}{16}$ inch. and which shows no signs of rot.

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KNOTS—One sound knot not over $\frac{1}{2}$ inch in diameter, not more than 12 inches from the center of the piece, or three sound pin knots not exceeding $\frac{1}{4}$ inch diameter located in same manner.

SPLITS—None.

SEASON CHECKS—Not more than $\frac{1}{2}$ inch deep nor more than 12 inches long.

HEART RINGS—None.

SHAKES—If they can be planed out with $\frac{1}{8}$ inch cut.

WORM HOLES—Not more than six pin worm holes in a Sand board, these holes not to be in clusters of more than three holes 6 inches apart.

BIRD PECKS—Allowed if sound.

WANE—Will be measured excluding the wane.

SAP—Bright sap accepted.

GRAIN—Grain can cross 2 inches in length of Sandboard as maximum.

DEFECTS REMOVABLE—If defects not admitted can be cut out so as to reduce Sandboard to a smaller size used and ordered by the buyer, it shall be so inspected.

REACHES.

To be cut from good, tough, straight-grained Oak or Hickory (when Oak is specified it will be understood as being White or Red Oak) suitable for wagon material. To be clear and perfect stock, free from **KNOTS**, **SPLITS**, **HEARTS**, **GRUB HOLES**, **HEART RINGS**, **SHAKES**, or **BIRD PECKS**. Bright sap accepted. The following defects will be admitted:

STAIN—Penetrating not more than $\frac{1}{8}$ inch, and which shows no signs of rot.

SEASON CHECKS—Not over $\frac{1}{4}$ inch deep or 12 inches long.

WORM HOLES—Not more than 6 pin worm holes in a Reach, these holes not to be in clusters of more than 3 holes 6 inches apart.

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POLES.

To be cut from good, tough, straight-grained Oak or Ash (when Oak is specified it will be understood as being White or Red Oak), suitable for wagon material. To be clear and perfect stock, free from KNOTS, SPLITS, HEARTS, GRUB HOLES, HEART RINGS, SHAKES, or BIRD PECKS. Bright sap accepted. The following defects will be admitted.

STAIN—Penetrating not more than $\frac{1}{8}$ inch, and which shows no signs of rot.

SEASON CHECKS—Not over $\frac{1}{4}$ inch deep or 12 inches long.

WORM HOLES—Not more than six pin worm holes in a Pole, these holes not to be in clusters of more than three holes 6 inches apart.

EVENERS.

To be cut from good, tough, straight-grained Hickory suitable for wagon material. To be clear and perfect stock, free from KNOTS, SPLITS, HEARTS, GRUB HOLES, HEART RINGS, SHAKES, WORM HOLES, or WANE. The following defects are admissible:

STAIN—Penetrating not more than $\frac{1}{8}$ inch, and which shows no signs of rot.

SEASON CHECKS—Not over $\frac{1}{4}$ inch deep or 12 inches long.

WORM HOLES—None.

BRIGHT SAP—No objection.

BIRD PECKS—Sound bird pecks admitted.

SAWED FELLOES.

To be cut from sound White or Red Oak, free from Knots, and all other defects, excepting that $\frac{1}{8}$ inch stain will be allowed if said stain shows no signs of rot. Must be manufactured so that grain will run straight through center of each piece. Cut full sizes and proper circles.

NO. 2 GRADE.

NOTE—This grade is intended to include such stock as cannot be accepted under No. 1

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or "Wagonmakers' Grade," yet is satisfactory to these using a lower grade.

AXLES.

No. 2 to be cut 6 feet in length from live black or shellbark Hickory. Defects as follows admissible:

STAIN—Sound stain accepted.

KNOTS—Not to exceed three sound $1\frac{1}{4}$ inch knots, or their equivalent in smaller knots.

SPLITS—On either end, extending not more than 6 inches in Axle or 3 inches on both ends.

SEASON CHECKS—No objection.

HEARTS or HEART RINGS—Not allowed.

SHAKES—That will plane out with $\frac{1}{8}$ inch

WORM HOLES—No objection, except the powder post worm.

BIRD PECKS—No objection.

WANE—One inch wane allowed.

GRAIN—Grain can cross in not less than 4 feet.

DEFECTS REMOVABLE—Any defects not admitted that can be cut out so as to reduce axle to a smaller size used and ordered by the buyer, it shall be so inspected.

Hewn axles shall be measured to square to the size they are ordered.

Defects at ends of axles that will admit working 5 feet 6 inches to be accepted.

NOTE—It was not deemed expedient at this time to fix rules for Bolsters, Sandboards, Reaches, Poles, Eveners, and Felloes, of the "No. 2 Grade."

**THESE RULES TO APPLY IN GRADING
OTHER HARDWOODS MANUFACTURED
FOR WAGON STOCK.**

WORKED GUM.

Rules as revised by The Dressed Gum Lumber Manufacturers' Association at Cairo, Ill., December 1, 1903, adopted by The National

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Hardwood Lumber Association on October 26, 1906.

1. Worked Gum must be inspected from the best or face side.

2. Defective dressing on reverse side admitted.

3. Slightly chipped grain on the face side admitted, provided it does not exceed six inches square in first and seconds, and twelve inches square in Saps and Selects in the aggregate.

4. Imperfect manufacture in worked stock, torn grain, broken knots, mis-matched, insufficient tongue or groove, shall be considered defects and will reduce the grade accordingly.

5. Partition, Ceiling, Flooring or Drop Siding having less than $\frac{1}{4}$ inch tongue shall not be admitted in any grade above No. 3 Common.

6. Wane on the reverse side not exceeding one-third the width and running not to exceed one-sixth the length of any piece, provided the wane does not extend into the tongue, or over one-half the thickness below the groove will be admitted.

STANDARD SIZES OF DRESSED GUM. .

Finishing— $\frac{1}{2}$ " S2S, $\frac{3}{4}$ "; $\frac{3}{4}$ " S2S, $\frac{7}{8}$ "; $\frac{3}{4}$ " S2S, $\frac{7}{8}$ "; 1" S2S, $1\frac{1}{8}$ "; $1\frac{1}{4}$ " S2S, $1\frac{1}{8}$ "; $1\frac{1}{2}$ " S2S, $1\frac{1}{8}$ "; 2" S2S, $1\frac{1}{4}$ ".

Casing and Base—Dressed to $1\frac{1}{8}$ " thick; $3\frac{1}{2}$ ", $4\frac{1}{2}$ ", $5\frac{1}{2}$ ", $6\frac{1}{2}$ ", $7\frac{1}{2}$ ", $8\frac{1}{2}$ ", $9\frac{1}{2}$ " and $11\frac{1}{2}$ " wide, counted $\frac{1}{2}$ " wider.

Flooring and Partition—Dressed to $1\frac{1}{8}$ " thick; $2\frac{1}{4}$ ", $3\frac{1}{4}$ ", $4\frac{1}{4}$ " and $5\frac{1}{4}$ " face width. Flooring to be S2S and center matched; counted $\frac{3}{4}$ " wider.

Ceiling— $\frac{3}{8}$ " dressed to $\frac{1}{4}$ "; $\frac{1}{2}$ " to $\frac{1}{4}$ "; $\frac{5}{8}$ " to $\frac{1}{4}$ "; $\frac{3}{4}$ " to $1\frac{1}{8}$ "; same widths as Partition.

BEVELED SIDING AND WEATHER-BOARDING.

Bevel Siding made from 1×4 ", 5" and 6" strips S4S to $1\frac{1}{8} \times 3\frac{1}{2}$ ", $4\frac{1}{2}$ ", $5\frac{1}{2}$ " and re-sawn on a bevel.

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No. 1 Grade will allow sound sap without limit, but is otherwise clear, except small defects which the lap will cover.

No. 2 Grade may contain imperfections in working or other defects which can be removed in two cuts without waste of more than 10 per cent of the length of any one piece.

No. 3 Grade permits all classes of defects, but must work without waste of more than one-third of the contents of any one piece.

No cutting to be less than 16" in No. 2 and No. 3 Grades.

PATENT OR DROP SIDING, FLOORING, CEILING AND PARTITION.

No. 1 Grade will allow sound sap without limit, but is otherwise without defects.

No. 2 Grade may contain imperfections in working and unsound defects which can be removed in two cuts without waste of more than 10 per cent of the length of any one piece.

No. 3 Grade permits all classes of defects but must work without waste of more than one-third of the contents of any one piece.

Patent or Drop Siding may be worked any standard pattern desired and is regularly made tongued and grooved, though may be ship-lapped if so ordered. State whether single or double cut is wanted, and, when possible, mail pattern with order to avoid misunderstanding.

No cutting to be less than 16" in No. 2 and No. 3 Grades.

Ceiling is all double beaded one side only, unless otherwise ordered. In ordering special patterns of Ceiling and Drop Siding any small amount produced of different grade than specified must be taken at corresponding difference in price.

No. 1 Finished in pieces 6" to 7" wide are Clear; pieces 8" to 10" may have one standard defect; pieces from 10" to 12" wide, two defects; pieces 13" or over may have three

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standard defects, or their equivalent in larger defects. (Sound sap is not considered a defect in this grade.)

No. 2 Finish is calculated to work 75 per cent clear in not over three pieces. Discolored sap, unless of an unsound nature, and small pin worm holes, are not considered defects in this grade.

WORKED POPLAR.

Rules formulated and adopted by The National Hardwood Lumber Association, June 10th, 1910.

GENERAL INSTRUCTIONS.

Poplar, Dressed or Worked.

1. Dressed Poplar shall be inspected from the best or face side. The reverse side may contain defective dressing, but no other defects that would not go in the grade.

2. Slightly chipped grain on face side admitted, provided it does not exceed 6 inches square in first and seconds, 12 inches square in saps and selects, and 18 inches square in No. 1 common, in the aggregate.

3. Imperfect manufacture in dressed or worked stock, such as torn grain, broken knots, mismatched, insufficient tongue or groove, shall be considered defects and will reduce the grade accordingly.

4. Partition, ceiling, flooring or drop siding, having less than three-sixteenths of an inch tongue, shall not be admitted in any grade above No. 2 common.

5. Wane on the reverse side, not exceeding one-third the width, and running not to exceed one-sixth the length of any piece, provided the wane does not extend into the tongue, or over one-half the thickness below the groove, will be admitted.

Bevel Siding.

Bevel Siding is made from 1x4, 5 and 6-inch strips, S. 4 S. to 27-32 by 3%, 4% and 5% inches and resawed on a bevel.

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No. 1—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Must be practically free of defects except 1 inch of sap or two knots on thin edge that will cover by lap.

Selects—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Will admit two sound knots $\frac{3}{4}$ inch in diameter, or one standard defect. Sap admitted without limit.

No. 1 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Sound discolored sap and scattering pin-worm holes not to be considered defects in this grade. In addition thereto boards may contain standard defects or their equivalent as follows:

4-ft. lengths, one.

5 to 9-ft. lengths, two.

10 to 14-ft. lengths, three.

15 to 20-ft. lengths, four.

No. 2 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Will admit all pieces that will not come up to the grade of No. 1 Common which can be used for cheap siding without waste of more than one-third the length of any one piece. Pin-worm holes admitted.

Drop Siding.

Made from 1x4, 5 and 6-inch strips.

Widths— $3\frac{1}{4}$, $4\frac{1}{4}$, $5\frac{1}{4}$ inches net face, counted as 4, 5 and 6-inch respectively.

Thickness— $\frac{3}{4}$ -inch net after surfacing.

The above covers all grades.

No. 1—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Must be practically free of defects excepting 1 inch of sap or two knots on thin edge that will cover by lap.

Selects—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Will admit two sound knots $\frac{3}{4}$ -inch in diameter, or one standard defect. Sap admitted without limit.

No. 1 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Sound discolored sap and scattering pin-worm holes not to be

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considered defects in this grade. In addition thereto boards may contain standard defects or their equivalent as follows:

4-ft. lengths, one.

5 to 9-ft. lengths, two.

10 to 14-ft. lengths, three.

15 to 20-ft. lengths, four.

No. 2 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Will admit all pieces that will not come up to the grade of No. 1 Common which can be used for cheap siding without waste of more than one-third the length of any one piece. Pin-worm holes admitted.

Dressed Dimensions Strips.

Widths, 3 inches and over.

No. 1 Dimensions—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Each piece must be practically clear on one face; 7 to 9 inches wide, 1 inch of bright sap admitted on one edge, showing on face side; 10 to 12-inch widths $1\frac{1}{2}$ inches of bright sap admitted on one edge, showing on face side.

Select. Dimensions—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Bright sap admitted without limit, and in addition thereto one standard defect or its equivalent admitted in boards 8 inches and under wide, and two standard defects or their equivalent admitted in boards 9 to 12 inches inclusive.

No. 1 Common. Dimensions—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Shall admit of any number of sound knots that paint will cover, the board to work full length and width. Bright or sound discolored sap and scattered pin-worm holes not to be considered defects in this grade.

No. 2 Common. Dimensions—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Shall include all boards that will work two-thirds or more of the same grade as No. 1 Common, in not to exceed three cuts the full width of the boards, no cutting to be shorter than 3 feet.

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Casing and Base.

Lengths: 8 feet and over, admitting 15% of odd lengths.

Widths: Net, $3\frac{1}{2}$, $4\frac{1}{2}$, $5\frac{1}{2}$, $6\frac{1}{2}$, $7\frac{1}{2}$, $8\frac{1}{2}$ and $9\frac{1}{2}$ inches, counted $\frac{1}{2}$ -inch wider than net face.

Thickness: 13-16 inch after surfacing.

The above refers to and covers all grades.

Firsts and Seconds—Each piece must be practically clear on face side.

7 to 10-inch widths, 1 inch of bright sap admitted on one edge, showing on face side.

Saps and Selects—Bright sap admitted without limit, and in addition one standard defect or its equivalent to be admitted in boards 8 inches and under, and two standard defects or their equivalent in boards 9 to 10 inches wide.

No. 1 Common—This grade will include all stock that will not come up to the grade of Saps and Selects, that will work two-thirds of its length clear face in pieces 3 feet long or longer, regardless of sap. Stained sap without limit, where there are no other defects, admitted in this grade.

Flooring and Ceiling.

Widths: $2\frac{1}{4}$, $3\frac{1}{4}$, $4\frac{1}{4}$ and $5\frac{1}{4}$ inches net face, counted as 3, 4, 5 and 6 inches, respectively.

Stock finished on the one-half inch shall be counted three-quarter inch wider than net face.

Thickness: 13-16-inch after surfacing.

The above covers all grades.

No. 1—Lengths: 8 to 20 feet, admitting 15% of odd lengths. Must be practically free from defects on face side.

Selects—Lengths: 6 to 20 feet, admitting 15% of odd lengths. Bright sap without limit or in the absence of sap two sound knots not to exceed $\frac{3}{4}$ -inch in diameter or one standard defect.

No. 1 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Bright or sound

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discolored sap and scattering pin-worm holes not to be considered defects in this grade. In addition thereto, boards may contain the following standard defects or their equivalent.

4-ft. lengths, one.

6 to 10-ft. lengths, two.

12 to 14-ft. lengths, three.

16 to 20-ft. lengths, four.

No. 2 Common—Lengths: 4 to 20 feet, admitting 15% of odd lengths. Will admit all pieces that will not come up to the grade of No. 1 Common, which can be used for cheap work without waste of more than one-third the length of any one piece. Pin-worm holes admitted.

Yellow face stock is a special grade.

Partition.

The rules for flooring and ceiling shall apply, excepting that the reverse side of the piece must not be of a lower grade than the face.

Mouldings.

No. 1.

Lengths: 8 feet and over, admitting 15% of odd lengths; 20% of 8, 9 and 10 feet, with not to exceed 10% under 10 feet.

Widths, thickness and pattern to be governed by Universal Moulding Book, and to be graded as follows:

Bright sap or slightly discolored sap shall be admitted without limit; otherwise clear, excepting slightly chipped grain not to exceed one-twelfth the length of any one piece.

No. 2.

Lengths: 6 feet and over, admitting 15% of odd lengths; 20% of 6, 7 and 8 feet, with not to exceed 10% under 8 feet.

Widths, thickness and pattern to be governed by Universal Moulding Book, and to be graded as follows:

No. 2 will include all moulding that will not come up to the grade of No. 1 that will work 50% clear in pieces 4 feet and longer. Sound discolored sap is no defect.

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MAPLE FLOORING.

The National Hardwood Lumber Association has adopted the rules of the Maple Flooring Manufacturer's Association, 807 Chicago Stock Exchange Bldg., Chicago, Ill.

CYPRESS AND YELLOW PINE.

The National Hardwood Lumber Association has adopted the cypress grading rules of the Southern Cypress Manufacturers' Association, Hibernia Bldg., New Orleans, La., and the yellow pine rules of the Yellow Pine Manufacturers' Association, Lumbermen's Bldg., St. Louis, Mo.

OAK FLOORING.

The National Hardwood Lumber Association has adopted the Oak Flooring grading rules of the National Oak Flooring Manufacturers' Association of America, Hammond Bldg., Detroit, Mich.

Note.—The inspection rules on maple flooring, cypress, yellow pine and oak flooring can be secured on direct application to the addresses shown above.



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